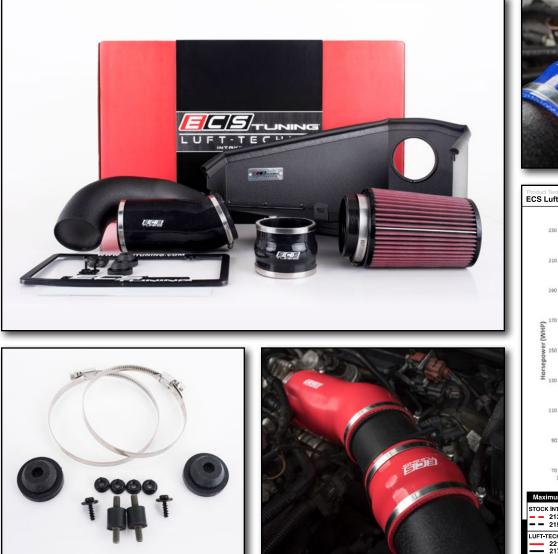


Volkswagen MK5 R32 Luft-Technik **Intake System Installation Instructions** 

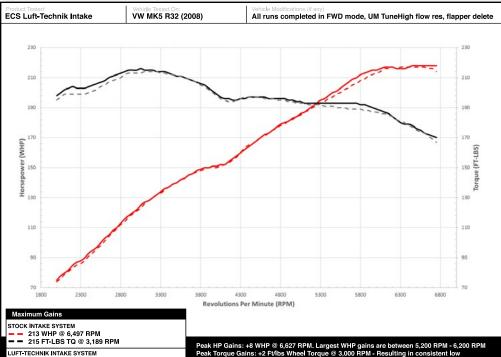


# Skill Level 1 - Easy

**Basic Skills** Required







221 WHP @ 6,627 RPM (+8 WHP) 217 FT-LBS TQ @ 3,000 RPM (+ 2.0 FT-LBS TQ)

Peak Torque Gains: +2 Ft/lbs Wheel Torque @ 3,000 RPM - Resulting in consistent low end torque increase from 2.200 RPM - 3.200 RPM

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

## INTRODUCTION

## **The Project:**

Installing an ECS Tuning Luft-Technik Intake System on your VW MK5 R32 is an enjoyable project which you can complete in just a short couple of hours. A performance intake system is an easy way to give your VR6 engine a serious performance and sound boost. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Thank you for making ECS Tuning your choice for performance parts and accessories, we appreciate your business!



Here's all the tools you'll need:

- 1. 10mm Socket & Ratchet
- 2. Phillips Head Screwdriver
- 3. T25 Torx Driver
- **4.** VAG Connector Release Tool
- 5. 5mm Hex (Allen)
- 6. Locking Spring Clamp Pliers
- 7. Wiper Arm Puller (optional)



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# **KIT CONTENTS**



Silicone Throttle Body Inlet Hose w/clamps (1)



Silicone Hump Coupler (1)



Heat Shield Assembly (1)



Air Filter w/clamp (1)

Intake Tube (1)

80-100mm Hose Clamp (2)



## **KIT CONTENTS**



Heat Shield Grommet (2) (1 grommet is optional, details on Page 17)

M6x25mm Screw (1) (optional, details on Page 17)

M6 Flat Washer (1) (optional, details on Page 17)

### **INSTALLATION NOTES**

- **RH** refers to the *passenger side* of the vehicle.
- LH refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

## **GENERAL PREPARATION AND SAFETY INFORMATION**

ECS Tuning cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.



NEVER get underneath a vehicle that is supported only by a jack, and ALWAYS make sure that the vehicle is securely supported on jack stands.

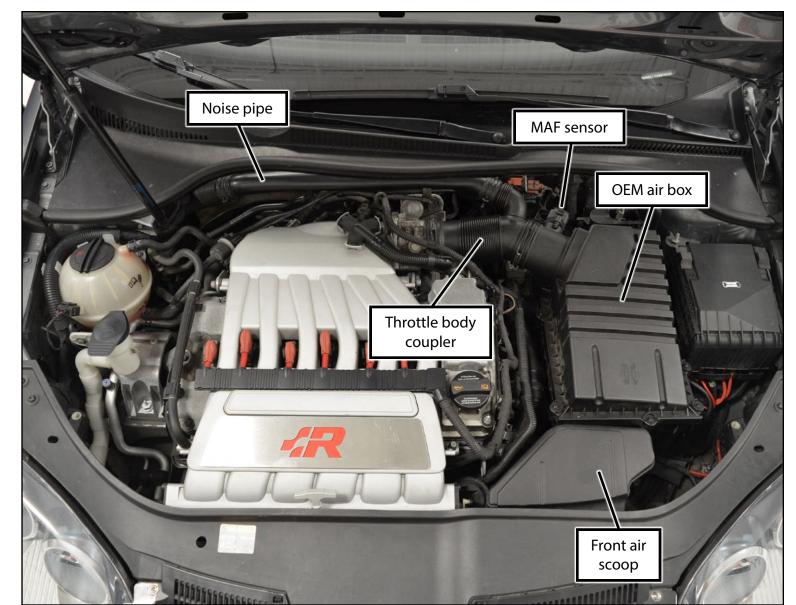


### **PROJECT OVERVIEW**

Take a moment and familiarize yourself with the components shown in the photo. We will be removing all of the original intake components for this install, but removing the noise pipe is optional. You can choose to leave the noise pipe in place along the firewall, or you can remove the pipe and plug the hole where it goes under the rain tray with a Noise Pipe Delete Kit. This delete kit is available at www.ecstuning.com as ES#2580252.

We will cover how to install the delete kit in these instructions, if you are not installing this kit simply skip past those steps.

#### Now let's get to it!



#### Step 1:

The front air scoop consists of three parts: the cover, the center duct, and the pickup. Remove the cover by releasing the tab on the side as shown and lifting it upward.



#### Step 2:

Release the front air scoop center duct by pulling it upward.

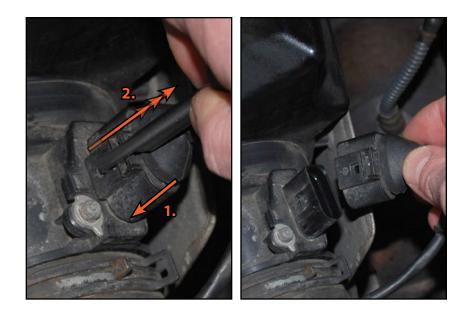


We will be leaving the front air scoop pickup in place for now. It will be easier to remove it later, once the air box has been completely removed.



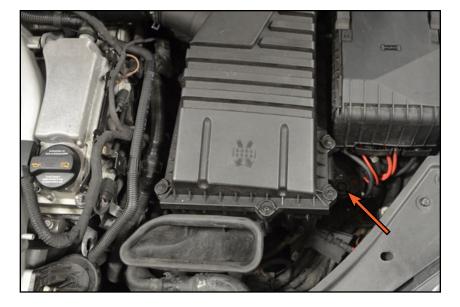
#### Step 3: Schwaben Connector Release Tool

Disconnect the Mass Air Flow sensor electrical connector using our Schwaben Connector Release or other suitable tool. The trick to removing these "push and pull" style of connectors is to first push and hold the connector down, which will release the tension between the locking tab and the catch on the sensor, then insert the tool and pull up. This will raise the locking tab in the connector just far enough to clear the catch on the sensor and it will slide off with ease.



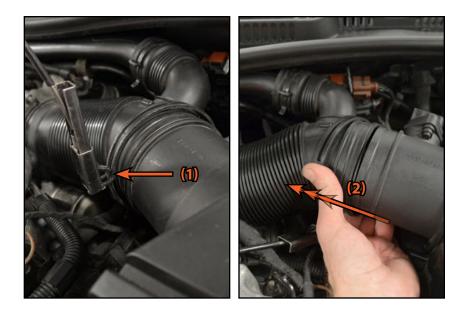
#### Step 4: 5mm Hex (Allen)

Loosen the screw which secures the front driver's side (LH) corner of the air box to the vehicle. This is a captured screw which won't come out of the grommet, just be sure to completely unthread it before proceeding.



Step 5: Locking Spring Clamp Pliers

Release the tension on the spring clamp that secures the throttle body coupler to the Mass Air Flow sensor (1) while simultaneously pulling the coupler off of the sensor (2).



#### Step 6:

Pull up on the air box to release the two rubber mounting grommets. Rotate the air box as needed and lift the entire assembly out of the vehicle.



Step 7: Locking Spring Clamp Pliers

Release the tension on the spring clamps which secure the throttle body coupler to the throttle body and the noise pipe, then remove the coupler from the vehicle.



#### Step 8: T25 Torx

Remove the two screws which secure the front air scoop pickup to the vehicle (arrows), then pull the panel rearwards and out of the core support.



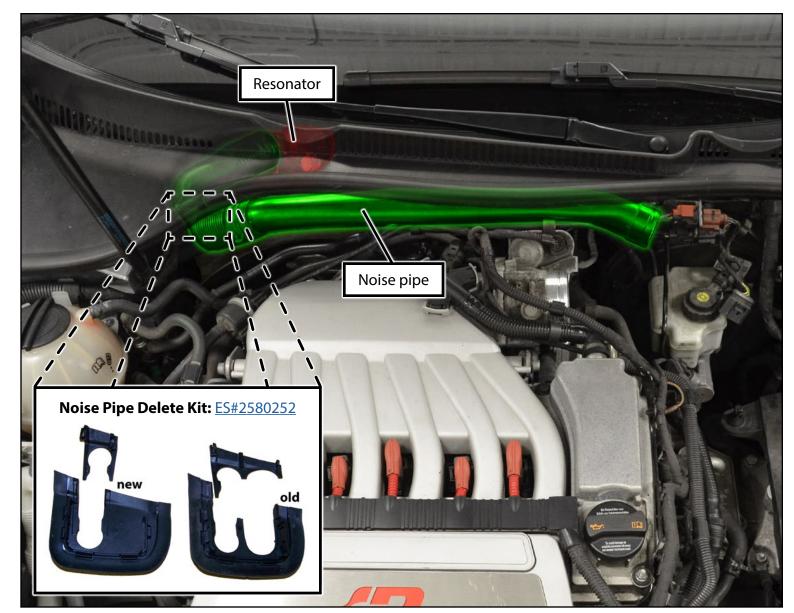
If you purchased a noise pipe delete kit (ES2580252), please proceed to the next page for installation instructions. If not, skip to Page 17.



The noise pipe (highlighted in **GREEN**) runs along the back side of the engine compartment and under the rain tray through a plastic retainer. The pipe then connects to a small resonator (highlighted in **RED**), which is attached to the firewall.

Over the next few pages we will go over how to remove the noise pipe, and how to install the delete kit which will plug the hole left in the cowl panel where the noise pipe was routed.

*Now let's get to it!* 



Step 1: Wiper Arm Puller

We chose to remove the rain tray rather than simply pry up on its front edge (a shortcut that commonly results in a cracked rain tray).

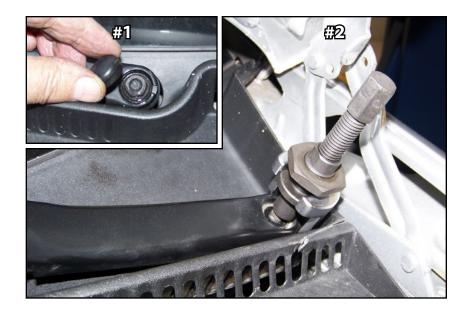
To do this the wiper arms need to be removed. Pop out the plastic buttons, unscrew the wiper arm retaining nuts (inset photo), then remove the arms.



We highly recommend the use of a wiper arm puller, we have two great options at www.ecstuning.com: ES3219170 & ES2190252.

#### Step 2:

Remove the weatherstrip that retains the front edge of the rain tray by simply pulling back on one end and peeling it off.





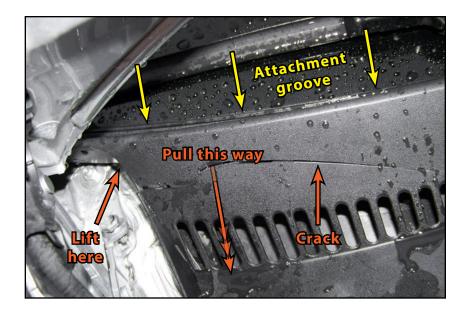
#### Step 3:

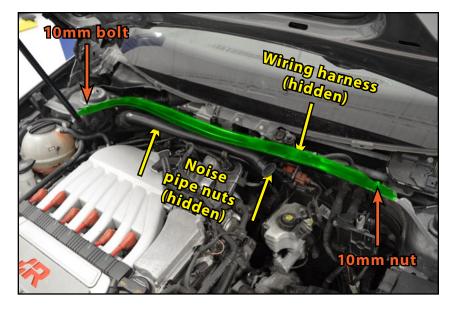
Gently lift up on one side of the rain tray and pull it away from the windshield until it starts to pop out of the attachment groove. Work your way carefully across the windshield until the tray is free, then remove it and lay it aside. The plastic is thin and may be brittle, so work carefully and slowly (we snapped a shot of a cracked tray to show what happens when muscle and enthusiasm get out of hand).

#### Step 4: 10mm Socket & Ratchet

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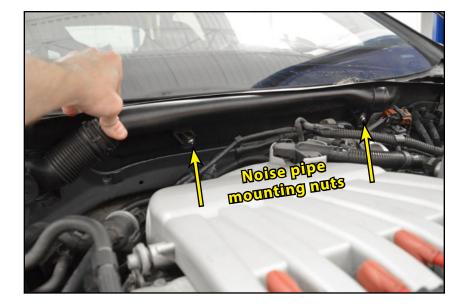
Unbolt the metal support crossmember (highlighted in **GREEN**), release the rain tray wiring harness from the clips, then lift the crossmember upward 1-2 inches. This will give us better access to the two nuts which secure the noise pipe to the metal support crossmember.





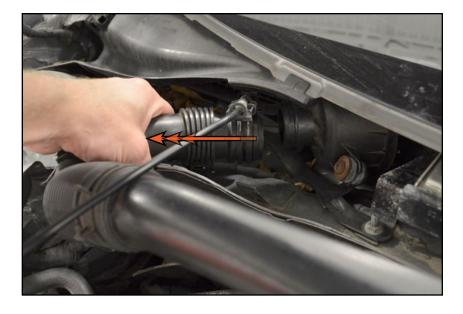
Step 5: 10mm Socket & Ratchet

While holding the metal support crossmember up 1-2 inches, remove the two mounting nuts which secure the noise pipe into place. Remove the metal support crossmember from the vehicle.



Step 6:	Locking Spring Clamp Pliers
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Release the tension on the spring clamp that secures the noise pipe to the resonator, then pull the pipe off as shown.



#### Step 7:

Remove the top locking clip that retains the sound tube and wiring harnesses, remove the noise pipe from the vehicle, then wiggle the lower plastic retainer around the wire harnesses and remove it from the cowl panel.



#### Step 8:

Insert the new blockoff plate into the water tray to close off the hole where the noise pipe used to be. Route the wire harnesses through the opening on the left, then slide the new retaining clip down over them until it snaps into place.

Reinstall the crossmember, rain tray, and wipers.

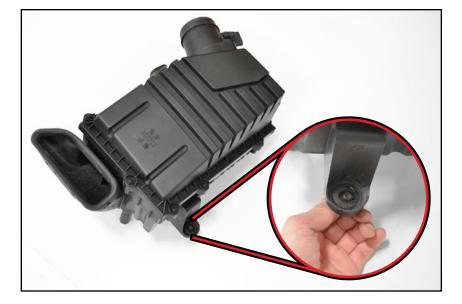


#### Step 1:

Locate and remove the mounting grommet which features a captured 5mm hex (allen) screw, we will be utilizing this grommet in the new ECS heat shield assembly.

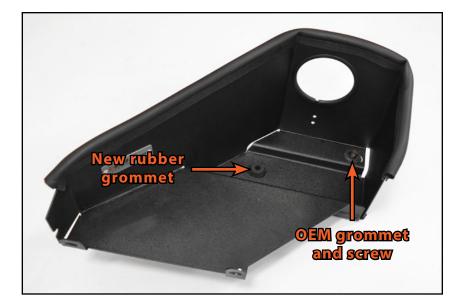


If this grommet has been lost or damaged and cannot be used, please reference our Helpful Tips & Tricks section on Page 23.



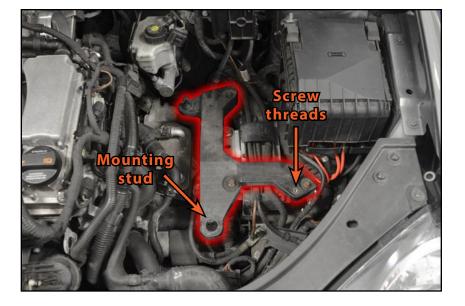
#### Step 2:

Install the mounting grommets into place in the heat shield, making sure that the larger ends of the grommets are located on the bottom.



Step 3:

Note the locations of the mounting stud and the screw threads which are on the OEM air box support (highlighted in **RED**).



#### Step 4:

Install the heat shield assembly into the vehicle by first placing the front edge under the lip of the radiator support, then guiding the rear of the heat shield downward past the fuse box.



Step 5:

T25 Torx

Install the mounting screws through the holes in the front of the heat shield and into the original air pickup mounting holes located on the radiator core support. Be careful to not overtighten these screws or you may strip the threads in the core support.



The passenger's side screw can be tricky to install due to a lack of space around it. A T25 socket and <sup>1</sup>/<sub>4</sub>" ratchet can be very helpful here.

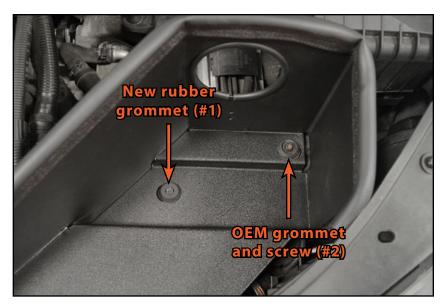
#### 5mm Hex (Allen) Step 6:

Push the new rubber grommet downward onto the OEM mounting stud (#1), then hand tighten the OEM captured screw into the threads in the air box bracket (#2).



If you have trouble installing the heat shield into place, or if the grommets are difficult to line up with the mounts, please reference our Helpful Tips & Tricks section on Page 24.

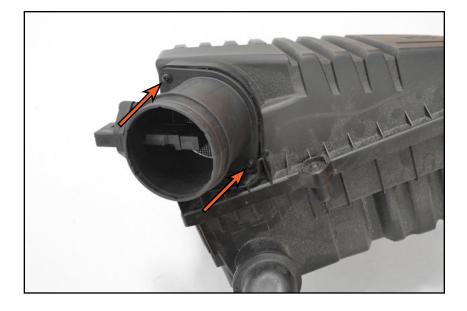






Step 7: Phillips Head Screwdriver

Remove the two screws and separate the MAF sensor from the original air box.

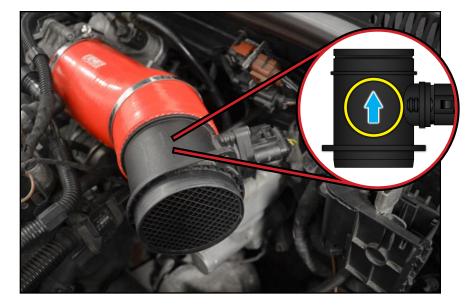


#### Step 8:

Install the new silicone throttle body inlet hose and the MAF sensor into place as shown, leaving both of the clamps loose at this time. Reconnect the MAF sensor electrical connector.



The MAF sensor has an arrow on the side (highlighted in the inset photo) to indicate direction of air flow. Be sure that this arrow is pointed toward the engine when installed.





Step 9: 10mm Socket & Ratchet

Install the two vibration dampers to the intake tube as shown, hand tighten the flanged nuts.



#### Step 10:

Insert the intake tube through the opening in the heat shield as shown and slide it through. We won't be mounting the intake tube into place just yet, proceed to the next page for final assembly instructions.



#### Step 11:

Slide the air filter onto the intake tube, then install the new silicone hump coupler between the MAF sensor and the intake tube, and slide the vibration dampers on the intake tube through the holes in the heat shield (inset photo). Hand tighten the two remaining flanged nuts onto the ends of the vibration dampers, securing the intake tube to the heat shield.

With all of the clamps loose, twist and manipulate the silicone hoses as needed to align the entire system. Once the system is aligned to your satisfaction, hand tighten all of the clamps.



## **HELPFUL TIPS & TRICKS**

#### Tip #1:

If the original grommet from your air box has been lost or damaged and cannot be used, and you have deleted the noise pipe, we have an easy solution for you. We have included an extra mounting grommet with the intake, simply remove the steel bushing spacer from the noise pipe mounting grommet and insert it into the spare ECS grommet as shown on the right.

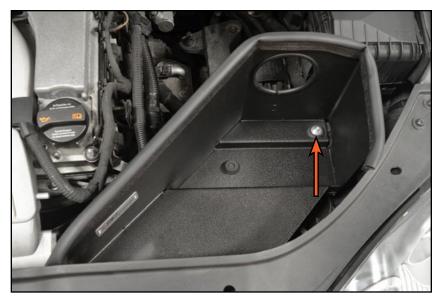
If you are not deleting the noise pipe on your vehicle, the spare ECS grommet can be used without the steel bushing spacer. This spacer provides a better overall fit for this mounting location, but it is not required.

Then, install the heat shield and use the 5mm M6 hex (allen) head screw and the M6 washer to secure the grommet into place (arrow in the photo on the right).



Click <u>HERE</u> to return to Page 17.

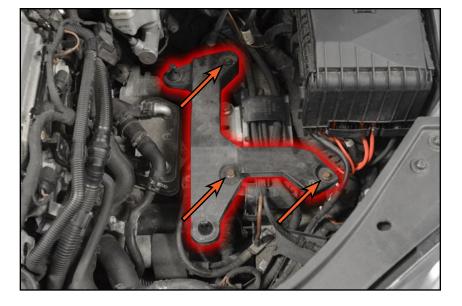


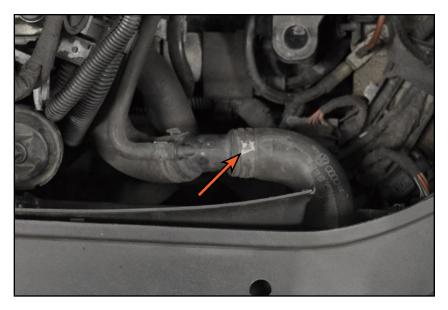


### **HELPFUL TIPS & TRICKS**

#### Tip #2:

If you have trouble getting the grommets in the heat shield to line up with the post and the threads in the air box support (highlighted in **RED**), try loosening the three 10mm bolts from the tray (arrows in the photo on the right). The holes for these bolts are slightly larger than the diameter of the threads, so there is some room for adjustment here.





#### Tip #3:

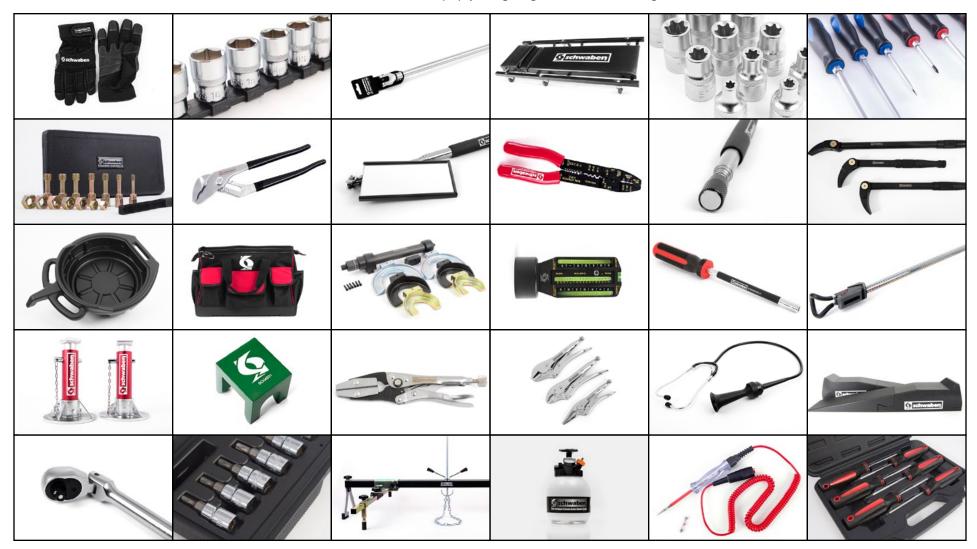
Check all the way around the heat shield to ensure that it isn't rubbing any surrounding components. Our test vehicle had recently been in for cooling system service, and the radiator hose under the air box was coming into contact with the bottom of the heat shield (shown with an arrow in the photo on the right). This was easily corrected by loosening the clamp at the radiator, rotating the hose downward a few degrees so they no longer came into contact, then retightening the clamp.



Click <u>HERE</u> to return to Page 19.

## **SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION**

At ECS Tuning, we carry a line of high quality Schwaben Tools and Equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.



### Your MK5 R32 Intake System installation is complete!



#### These instructions are provided as a courtesy by ECS Tuning

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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